CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

NABL - Accredited Laboratory as per ISO / IEC-17025 :2005

T-2377

Job No.: CTCE/BBMP/W.No.14/HCS/CSR-10/965h/CEMENT/2015-16 Date: 07.10.2015

TEST REPORT ON CEMENT

*** CUSTOMER**	:	**Asst. Executive Engineer**, T. Dasarahalli Sub Division, BBMP, Bangalore.
***AGENCY**	:	**Mr. H.C. Siddegowda,** A Hullakere, Bevinahalli (Post), Mandya (Taluk & District).
***NAME OF THE WORK**	:	Improvements to roads and drain at 1st and 2nd cross (Left side) 8th main road Bhuvaneshwari nagara in Ward No.14, Bagalagunte, BBMP, Bangalore.
***REFERENCE**	:	BBMP/DZ/AEE/TDSD/PR/2015-16 Dated: 05.10.2015
SAMPLE ID	:	Cement
SAMPLE RECEIVED ON	:	05.10.2015
PERIOD OF TESTING	:	05.10.2015 to 07.10.2015

The results of the tests conducted on the cement sample are as follows:

Sl. No	Descriptions	Test Method as per IS	Test Result	Requirements as per IS: 8112-2013
1	Standard Consistency	IS-4031 (Part -4) 1988(RA-2009)	28.50 %	-
2	a) Initial Setting Time	IS-4031 (Part -5) 1988(RA-2009)	155 Minutes	Not Less than 30 Minutes
	b) Final Setting Time	IS-4031 (Part -5) 1988(RA-2009)	470 Minutes	Not More than 600 Minutes
3	Soundness by Le Chartlier Method	IS-4031 (Part-3) 1988(RA-2009)	1 mm	Not more than 10mm

*Information is furnished by the Customer/Representative.

Note:

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⇒ The results indicated above are based on the tests carried out on the samples received in the laboratory.

⇒ Any Query regarding the report must be reported within 30 days from the date of testing.

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Job No.: CTCE/BBMP/W.No.14/HCS/CSR-10/965h/SAND-Gradation/2015-16 : 07.10.2015

TEST REPORT ON DETERMINATION GRADATION OF FINE AGGREGATES

*** Customer** : **Asst. Executive Engineer,** T. Dasarahalli Sub Division, BBMP, Bangalore.

*** Agency** : **Mr. H.C. Siddegowda,**
A Hullakere, Bevinahalli (Post), Mandya (Taluk & District).

*** Name of Work** : Improvements to roads and drain at 1st and 2nd cross (Left side) 8th main road Bhuvaneshwari nagara in Ward No.14, Bagalagunte, BBMP, Bangalore.

Reference : BBMP/DZ/AEE/TDSD/PR/2015-16 Dated: 05.10.2015

Technical Reference : IS : 2386 Part 1 - 1963 RA-2007

Sample ID : Fine Aggregates

Sample Received on : 05.10.2015

Date of Testing : 07.10.2015

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Total Wt. of Aggregates in gms **1000**

Is Sieve Size in mm	Cumulative Weight Passing in %	Specific Limits as per IS 383-1970 (RA- 2007)			
		Zone-I	Zone-II	Zone-III	Zone-IV
10	100	100	100	100	100
4.75	92.74	90-100	90-100	90-100	95-100
2.36	73.29	60-95	75-100	85-100	95-100
1.18	50.65	30-70	55-90	75-100	90-100
600 Micron	24.78	15-34	35-59	60-79	80-100
300 Micron	14.15	5-20	8-30	12-40	15-50
150 Micron	6.62	0-10	0-10	0-10	0-15

* Information is furnished by the Customer/Representative

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Remarks : This sample is under Zone-I specific limits.

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Job No.: CTCE/BBMP/W.No.14/HCS/CSR-10/965h/AGG/GR/2015-16 : 07.10.2015

TEST REPORT ON DETERMINATION GRADATION OF COARSE AGGREGATES

*** Customer** : **Asst. Executive Engineer,** T. Dasarahalli Sub Division, BBMP, Bangalore.

*** Agency** : **Mr. H.C. Siddegowda,**
A Hullakere, Bevinahalli (Post), Mandya (Taluk & District).

*** Name of Work** : Improvements to roads and drain at 1st and 2nd cross (Left side) 8th main road Bhuvaneshwari nagara in Ward No.14, Bagalagunte, BBMP, Bangalore.

Reference : BBMP/DZ/AEE/TDSD/PR/2015-16 Dated: 05.10.2015

Technical Reference : IS : 2386 Part 1 -1963 RA-2007

Sample ID : Coarse Aggregates (40mm)

Sample Received on : 05.10.2015

Date of Testing : 07.10.2015

Total Wt. of Aggregates in gms= **10000**

Is Sieve Size in mm	Cumulative Weight Passing in %	Specific Limits as per IS 383-1970 (RA- 2007)	
		Graded	Single Sized
80	100	100	-
63	100	-	100
40	96.45	95-100	85-100
20	39.65	30-70	0-20
10	14.90	10-35	0-5
4.75	3.30	0-5	-

* Information is furnished by the Customer/Representative

Remarks : This sample is under Graded specific limits.

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T-2377

Job No.: CTCE/BBMP/W.No.14/HCS/CSR-10/965h/CC Solid Block/2015-16 : 09.10.2015

TEST REPORT ON SOLID CONCRETE BLOCKS

* Customer : **Asst. Executive Engineer,** T. Dasarahalli Sub Division, BBMP, Bangalore.

* Agency : **Mr. H.C. Siddegowda,**
A Hullakere, Bevinahalli (Post), Mandya (Taluk & District).

* Name of the Work : Improvements to roads and drain at 1st and 2nd cross (Left side) 8th main road Bhuvaneshwari nagara in Ward No.14, Bagalagunte, BBMP, Bangalore.

Reference : BBMP/DZ/AEE/TDSD/PR/2015-16 Dated: 05.10.2015

Sample Received on : 05.10.2015

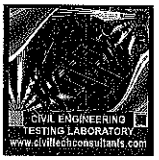
Date of Testing : 09.10.2015

Size of Blocks : 400mm x 200mm x 200mm

Cross Sectional Area : 80000 mm^2

Technical Reference : IS: 2185 (Part 1) - 2005

No. of Blocks Tested : 08



Sl.No.	Block ID	Wt. in Kg	Failure load (KN)	Compressive strength (N/mm^2)	Requirement as per IS 2185 (Part 1) - 2005
1	Block 1	34.25	268.5	3.36	Minimum required Compressive Strength of Individual Units 3.20 N/mm^2
2	Block 2	35.62	272.4	3.41	
3	Block 3	36.32	270.8	3.39	
4	Block 4	34.10	272.9	3.41	
5	Block 5	35.26	269.5	3.37	
6	Block 6	35.21	270.4	3.38	
7	Block 7	36.98	271.3	3.39	
8	Block 8	35.60	269.2	3.37	

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T-2377

Job No.: CTCE/BBMP/W.No.14/HCS/CSR-10/965h/CUBE/2015-16 23.11.2015

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

***Customer** : **Asst. Executive Engineer,** T. Dasarahalli Sub Division, BBMP, Bangalore.

***Agency** : **Mr. H.C. Siddegowda,**
A Hullakere, Bevinahalli (Post), Mandya (Taluk & District).

***Name of the work** : Improvements to roads and drain at 1st and 2nd cross (Left side) 8th main road Bhuvaneshwari nagara in Ward No.14, Bagalagunte, BBMP, Bangalore.

Reference : BBMP/DZ/AEE/TDSD/PR/2015-16 Dated: 05.10.2015

***Sample ID** : Cement Concrete

Size of cubes : 150mmx150mmx150mm

Cross Sectional Area : 22500 mm^2

Technical Reference : IS: 516-1959 (Reaffirmed 2008)

***Grade of Concrete** : M_{15}

Compressive Strength as on : 28th day

Sample Received on : 26.10.2015

Sl.No.	*Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	26.10.2015	23.11.2015	8.263	372.3	16.55
2	26.10.2015	23.11.2015	8.157	365.4	16.24
3	26.10.2015	23.11.2015	8.326	389.6	17.32

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Job No.: CTCE/BBMP/W.No.14/HCS/SDBC/Bit/2015-16 06.11.2015

BITUMEN CONTENT DETERMINATION OF SEMI DENSE BITUMINOUS CONCRETE MIX

AS per IRC:SP:-1984

CUSTOMER	**Asst. Executive Engineer,** T. Dasarahalli Sub Division, BBMP, Bangalore.
AGENCY	**Mr. H.C. Siddegowda,** A Hullakere, Bevinahalli (Post), Mandya (Taluk & District).
NAME OF THE WORK	Improvements to roads and drain at 1st and 2nd cross (Left side) 8th main road Bhuvaneshwari nagara in Ward No.14, Bagalagunte, BBMP, Bangalore.
REFERENCE	BBMP/DZ/AEE/TDSD/PR/2015-16 Dated: 05.10.2015
SAMPLE I/D	Roads in Bhuvaneshwari Nagara in Bagalagunte W.No.14
DATE OF TESTING	06.11.2015

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BITUMEN CONTENT DETERMINATION

Description	Trail 1	Trail 2
1. Weight of Mixture before Test, g	500	500
2. Weight of Mixture after Test, g	475.5	474.5
3. Weight of Asphalt and Mineral matter Extracted, g	-	-
4. Weight of Mineral Matter, g.	-	-
5. Weight of Ash, g		
6. Weight of Bitumen Extracted, g. (corrected)	24.5	25.50
7. Bitumen content in %	4.90	5.10
8. Average	**5.00**	

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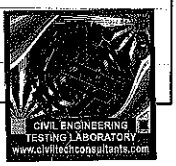
Job No.: CTCE/BBMP/W.No.14/HCS/SDBC/Bit/2015-16 06.11.2015

BITUMEN CONTENT GRADATION DETERMINATION OF SEMI DENSE BITUMINOUS CONCRETE MIX

As per IS2386 and IRC:SP:11-1984

CUSTOMER	**Asst. Executive Engineer,** T. Dasarahalli Sub Division, BBMP, Bangalore.
AGENCY	**Mr. H.C. Siddegowda,** A Hullakere, Bevinahalli (Post), Mandya (Taluk & District).
NAME OF THE WORK	Improvements to roads and drain at 1st and 2nd cross (Left side) 8th main road Bhuvaneshwari nagara in Ward No.14, Bagalagunte, BBMP, Bangalore.
REFERENCE	BBMP/DZ/AEE/TDSD/PR/2015-16 Dated: 05.10.2015
SAMPLE I/D	Roads in Bhuvaneshwari Nagara in Bagalagunte W.No.14
DATE OF TESTING	06.11.2015



GRADATION AFTER EXTRACTION

Sieve Size in mm	Trail 1				Specified Limits as per MORTH specification table 500-15 (Grading-2)
	Weight Retained, gm	% Retained	%Cummulative Retained	% Passing	
13.2	0	0	0	100	100
9.5	32.65	6.87	6.87	93.13	90-100
4.75	253.4	53.29	60.16	39.84	35-51
2.36	55.48	11.67	71.83	28.17	24-39
1.18	35.63	7.49	79.32	20.68	15-30
0.3	32.47	6.83	86.15	13.85	9-19
0.075	38.95	8.19	94.34	5.66	3-8

Sieve Size in mm	Trail 2				Specified Limits as per MORTH specification table 500-15 (Grading-2)
	Weight Retained, gm	% Retained	%Cummulative Retained	% Passing	
13.2	0	0	0	100	100
9.5	33.56	7.07	7.07	92.93	90-100
4.75	261.4	55.09	62.16	37.84	35-51
2.36	32.58	6.87	69.03	30.97	24-39
1.18	36.47	7.69	76.71	23.29	15-30
0.3	39.68	8.36	85.08	14.92	9-19
0.075	40.15	8.46	93.54	6.46	3-8

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